



Understanding the Impacts of Heat on Health

What was the issue?

Heat-related morbidity and mortality are public health concerns. An aging population and increasing urbanization, combined with rising temperatures and more frequent heat waves, make the Northeast region particularly vulnerable to heat stress. Heat index is a measure that combines heat and humidity that better reflects what the temperature actually “feels like.” The National Weather Service (NWS) would issue an Excessive Heat Advisory when the Heat Index was forecast to be 100°F. The NH Environmental Public Health Tracking (EPHT) Program believed that adverse health impacts were associated with more moderate temperatures, often below the NWS threshold.

What did the NH Tracking Program do?

The Tracking Program, along with colleagues from Maine CDC, Rhode Island Department of Health, and Brown University, evaluated the impacts of heat on health across the Northeast. Results suggest that all-cause emergency department visits and deaths increase significantly, by 7.5 and 5.1 percent, respectively, on days when the heat index reached 95°F as compared with days with a maximum heat index of 75°F.

In order to translate these findings into public health action, a collaborative workgroup was established. The Northeast Heat Collaborative worked closely with the NWS to revise the Excessive Heat Advisory threshold. In December 2016, the NWS released a new policy stating that an Excessive Heat Advisory will now be issued when the Heat Index is forecast to be at least 95°F for two consecutive days, or 100°F for any length of time. A study co-authored by members of the Collaborative, *Heat-Related Morbidity and Mortality in New England: Evidence for Local Policy*, was published in *Environmental Research* in July 2017.

NH EPHT then worked with partners in NH Homeland Security and Emergency Management (HSEM) to update the NH State Heat Plan. The updated plan incorporates both the new scientific findings and the new NWS policy.

How did this improve public health?

The new scientific findings help stakeholders across the Northeast develop targeted outreach materials for the most vulnerable populations, including seniors, young children, and people with chronic health conditions.

This work also clarifies roles for Public Health and Emergency Management when responding to extreme heat events. It is clear that preventive action must start during moderate temperatures. The updated NH State Heat Plan identifies multiple phases of response. Each phase is defined by specific triggers for action and specific activities, enabling streamlined outreach and communication during moderate temperatures. The revised NWS policy and NH State Heat Plan exemplify how data translates into action.

“It is expected that this change will alert people sooner to impending heat threats and, if acted upon, reduce the number of emergency department visits,”
John Guiney, Chief of the Eastern Regional Headquarters, National Weather Service

